

IN THE SPECIFICATION

Please insert the following new paragraph at line 5 on page 1:

This is a continuation of application no. 09/915,706, filed July 26, 2001, now abandoned.

Please delete the paragraph on page 5, line 4, and replace it with the following paragraph:

Fig. 2 depicts the nucleotide sequence (SEQ ID NO: 1) of the cloned region of DNA containing *mugA*.

Please delete the paragraph on page 5, line 5, and replace it with the following paragraph:

Fig. 3a depicts the putative amino acid sequence (SEQ ID NO: 2) of ORF A/MugA.

Please delete the paragraph on page 5, line 6, and replace it with the following paragraph:

Fig. 3b depicts the putative amino acid sequence (SEQ ID NO: 3) of ORF B.

Please delete the paragraph on page 5, line 7, and replace it with the following paragraph:

Fig. 3c depicts the putative amino acid sequence (SEQ ID NO: 4) of ORF C/EiaA.

Please delete the paragraph on page 8, lines 16-23, and replace it with the following paragraph:

To screen for the presence of the *mugA* gene in *V. anguillarum* and other bacteria, blots were probed with a digoxigenin-dUTP labeled *mugA* gene probe. Briefly, primers were derived from the sequence of the mini-Tn10 interrupted gene as *mugA*-forward (5'-TTTCTGCAGCTGGTTGAAATAACTCAAGGCC-3' (SEQ ID NO: 5)) and *mugA*-reverse (5'-TTTCTGCAGGGATCCGAAACGGAAGGCTTCGC-3' (SEQ ID NO: 6)) (Gibco BRL). A 1.4 kb DNA fragment of the *mugA* gene was PCR amplified from *V. anguillarum* genomic DNA using the primers and a PCR-DIG Probe Synthesis Kit (Boehringer Mannheim, Germany) according to the instructions of the manufacturer. PCR conditions are indicated below.

Please delete the paragraph on page 9, line 22 to page 10, line 14, and replace it with the following paragraph:

To obtain the wild-type *mugA* gene, total genomic DNA of *V. anguillarum* M93Sm was extracted and digested to completion with *Hind*III (Promega) and *Bam*HI (Promega), ligated to *Hind*III and *Bam*HI digested pBluescript, and transformed into *E. coli* (XLI MRF⁺). Transformants were plated on LB10 Amp¹⁰⁰ plates containing isopropylthiogalactoside (IPTG; 100 mM) and 5-Bromo-4-chloro-3-indoyl- β -D-galactopyranoside (X-Gal; 80 g/ml)(BIO-RAD laboratories, Richmond, CA) and allowed to incubate overnight at 37°C. Plating on the medium allowed for blue (lac⁺) - white (lac⁻) screening for inserts in the *lacZ* gene of pBluescript. White ampicillin resistant colonies were transferred to fresh LB10 Amp¹⁰⁰ plates, allowed to grow overnight at 37°C, and blotted onto nylon membranes. Colony blots were performed as previously described (4), using the digoxigenin-dUTP labeled *mugA* gene as a

probe. Colonies that hybridized to the *mugA* probe were screened by PCR analysis, using the *mugA* forward and reverse primers described above. DNA sequence analysis revealed that this yielded a 2 kb fragment containing all but the last 113 bp of the *mugA* gene. The entire wild-type *mugA* gene was obtained following PCR amplification from *V. anguillarum* M93Sm using the *mugA*-forward primer (described above) and *mugA*-reverse2 primer (5'TTTAAGCTTCACGCATGTAAATACTTGCC-3' **(SEQ ID NO: 7)**).